

REMARKS

Claims 1-18 are currently pending in the above-identified patent application. Claim 1 has been amended to recite that said step of directing said plurality of parallel data streams to a corresponding plurality of said plurality of disk drives is achieved by using a crossbar switch. No new matter has been added by this change since support therefor may be found in presently canceled claim 7, as originally filed.

In a telephonic interview between Examiner Richard B. Franklin, Supervising Examiner Niketa Patel and applicant's attorney, Samuel M. Freund, on October 06, 2008, the issue of whether the rejection of subject independent claims 1, 9 and 14 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,724,539 (Riggle et al.) might be overcome was discussed. Examiner Franklin and Supervising Examiner Patel found applicant's argument unpersuasive, and no agreement concerning these claims was reached.

In the Office Action dated August 05, 2008, made final, claims 1-18 were rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,724,539 (hereinafter Riggle) since the Examiner stated that as per claim 1, Riggle teaches a method comprising addressing a plurality of data strips from data to a chosen disk of a plurality of disk drives such that the throughput of each of the plurality of disk drives is maximized; forming a data stream comprising data strips, the data stream having a first throughput; creating a plurality of parallel data streams, each of the plurality of parallel data streams having an equal second throughput, the second throughput being smaller than the first throughput; directing the plurality of parallel data streams to a corresponding plurality of the plurality of disk drives (Figure 1, Item 150, Col. 6, Lines 28-31) such that each data strip in the plurality of data strips is transmitted to the chosen disk of the plurality of disk drives (Col. 6 Lines 31-34); and storing each of the data strips on the each of plurality of disk drives (Col 6 Lines 31-34).

As per claims 9 and 14, the Examiner continued, Riggle teaches a system comprising a plurality of disk drives each having a communication channel capable of communicating at a first throughput; a controller adapted to address a plurality of data strips from the data to a chosen disk of the plurality of disk drives such that the throughput of each of the plurality of disk drives is maximized, and form a data stream

comprising the data strips, the data stream having a second throughput (Col 5 Lines 5-8 and 13-17); a buffered switch in communication with the controller adapted to create a plurality of parallel data streams (Col. 6, Lines 28-31), each of the plurality of parallel data streams having the second throughput, the first throughput being smaller than the second throughput; a crossbar switch (Figure 1, Item 100) in communication with the buffered switch and adapted to direct the plurality of parallel data stream to the plurality of disk drives such that the each of the separate data strips are transmitted to each of the plurality of disk drives to which the separate data strips are addressed (Col. 6, Lines 31-40); and wherein the plurality of disk drives are adapted to receive the plurality of parallel data streams and store the date strips on the disk drives (Col. 6, Lines 31-34).

For the reasons to be set forth hereinbelow, applicant respectfully disagrees with the Examiner concerning the rejection of claims 1-18 under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,724,539 (Riggle et al.).

The Examiner rejected dependent claims 2-8, 10-13 and 15-18 under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,724,539 (Riggle et al.). Claim 7 has been canceled by this Amendment D. Since dependent claims 2-8, 10-13 and 15-18 depend from independent claims 1, 9 and 14, respectively, and applicant believes that these independent claims are patentable over Riggle et al., applicant believes that no further response is required with regard to these claims.

Turning now to the Examiner's rejection of now abandoned claim 7 in the present Office Action, concerning the use of a crossbar switch, which claim 1, as amended by this Amendment D, and claims 9 and 14 recite (claim 9 by actual recitation, and claim 14 by functional language), the Examiner stated that Riggle teaches wherein the directing of parallel data streams is performed by a crossbar switch (Figure 1, Item 100; Col. 6, Lines 28-31). Applicant wishes to point out that Figure 1 of Riggle teaches that data flowing through a **single serial interface, 90**, is divided into a plurality of data streams by MUX **100** to each of which FIFO apparatus **120** is applied before the data streams are sent to disk drives **130 directly** from a corresponding FIFO apparatus. A crossbar switch is therefore not taught by Riggle (See, e.g., FIGURE 1 of the present patent application, as originally filed, where it is clearly shown that **multiple, parallel data streams** are directed by crossbar switch 116 into **multiple** disk drives.). Column 6,

lines 23-40 of Riggle state: "The data in buffer **60** is further transferred under control of microprocessor block **50** of storage controller **40** via a drive buffer interface **80** and a **serial** (serial may mean bit, byte or word wide serial) **interface 90** to a **serial input/output (I/O) terminal of a drive multiplexer** (designated as MUX) **100**. The serial data stream is then divided by storage controller **40** into stripes of predetermined size which are distributed among a set of parallel drive interfaces **110**. The stream of data on each drive interface **110** is placed into a respective FIFO block **120** used for short term buffering of data transferred to and from its associated disk drive **130** via device interface **140**. The intermediate data buffering using FIFO blocks **120** allows partial decoupling of the data flow in the event that the instantaneous bandwidth of parallel data transfer to and from a stripe set of disk drives **130** in a disk array **150** occurs at a combined transfer rate exceeding the bandwidth of serial interface **90**." (Emphasis added by applicant.).

Subject claim 1, as amended, recites in part: "... **creating a plurality of parallel data streams**, each of said plurality of parallel data streams having an equal second throughput, said second throughput being smaller than said first throughput; **directing said plurality of parallel data streams** to a corresponding plurality of said plurality of disk drives using a crossbar switch such that each data strip in said plurality of data strips is transmitted to said chosen disk of said plurality of disk drives" (Emphasis added by applicant.). A crossbar switch, also known as a cross-point switch or a matrix switch, is a switch connecting multiple inputs to multiple outputs in a matrix manner.

Subject apparatus claim 9 recites a crossbar switch, while apparatus claim 14 recites in part: "... a switch means in communication with said buffer means and adapted to direct said plurality of parallel data streams to a corresponding plurality of said plurality of disk drives such that each of said separate data strips are transmitted to each of said plurality of disk drives to which said separate data strips are addressed... ."

It is known that "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *Soundscriber Corp. v. U.S.*, 360 F.2d 954, 960, 148 USPQ 298, 301, adopted, 149 USPQ 640 (Ct. Cl. 1966). Subject independent claims 1, 9 and 14, as amended, recite either directly or functionally a switch which transmits each of said parallel data strips to each of said plurality of disk

drives to which said separate data strips are addressed. Thus, applicant respectfully believes that Riggle does not anticipate independent claims 1, 9 and 14, as amended."

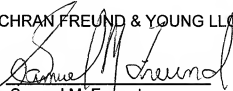
In view of the discussion presented hereinabove, applicant believes that subject claims 1-6 and 8-18, as amended, are in condition for allowance or appeal, the former action by the Examiner at an early date being earnestly solicited.

Reexamination and reconsideration are respectfully requested.

Respectfully submitted,

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